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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,673	08/19/2003	Michael L. Lightstone	NVID-066/00US	3509

7590 12/28/2006
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EXAMINER

CHAWAN, SHEELA C

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/642,673

Applicant(s)

LIGHTSTONE ET AL.

Examiner

Sheela C. Chawan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-14, 16, 17 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 11, 15 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The Examiner has approved drawings filed on 8/19/03.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19, 20 and 21 are rejected under 35 U.S.C. 101 because the claimed invention 19 and 20 are directed to non-statutory subject matter. The terminology "A machine-readable medium having instruction stored thereon for execution by a processor" alone has no set definition. The following claim formats are acceptable and not subject to a 101 rejection "A computer readable medium encoded with a computer program" for performing the steps of ...". See – MPEP 2106.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if

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the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 6 and 19, are rejected under 35 U.S.C. 102(e) as being anticipated by Kahn et al., (US. 6,563,550 B1).

As to claim 1, Kahn discloses a method for detecting a format of a digital video data sequence, comprising:

segmenting a first field (column 4, lines 3-17) of digital video data into a first plurality of pixel groups (column 4, lines 5-7);

segmenting a second field (column 4, lines 21-30) of digital video data into a second plurality of pixel groups; producing a plurality of pixel group scores based on differences (column 5, lines 44- 67, column 6, lines 1-2) between corresponding pixel groups in the first plurality of pixel groups and the second plurality of pixel groups (column 5, lines 44- 67, column 6, lines 1-2); and

determining a field difference metric between the first field of digital video data and the second field of digital video data based on the plurality of pixel group scores (column 5, lines 17 – 26, 44- 67, column 6, lines 1-13).

As to claim 2, Kahn discloses the method of claim 1, wherein the first plurality of pixel groups include a first plurality of blocks, the second plurality of pixel groups include a second plurality of blocks, and the plurality of pixel group scores includes a plurality of block scores (column 5, lines 27- 67, column 6, lines 1-2, 3-13).

As to claim 3, Kahn discloses the method of claim 1, wherein producing the plurality of pixel group scores includes measuring pixel differences between

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corresponding pixels in the first field of digital video data and the second field of digital video data (column 6, lines 39- 60, column 8, lines 14-28).

As to claim 4, Kahn discloses the method of claim 1, wherein determining the field difference metric includes selecting a sub-set of the plurality of pixel group scores (column 6, lines 39- 67, column 7, lines 1-6).

As to claim 5, Kahn discloses the method of claim 1, further comprising cropping the first field of digital video data and the second field of digital video data (column 6, lines 39- 67, column 7, lines 1-6).

As to claim 6, Kahn discloses the method of claim 1, further comprising filtering the first field of digital video data and the second field of digital video data (column 10, lines 27-59).

As to claim 19, see the rejection of claim 1 above.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7- 10, 12- 14, 16 - 17, 20 and 21, are rejected under 35 U.S.C. 102(b) as being anticipated by De haan et al., (US. 6,278,736 B1).

As to claim 7, De haan discloses a method for detecting a format of a digital video data (column 11, lines 5-7) sequence, comprising:

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producing a normalized field difference sequence based on a comparison of two fields (column 1, lines 44- 60) in a sequence of data fields (column 3, lines 56-67, column 4, lines 1-35);

comparing the normalized field difference sequence with at least one test vector (column 1, lines 44-63, column 2, lines 7-13, column 3, lines 56-67, column 4, lines 1-35); and

determining whether the received sequence of data fields is film mode or video (column 10, lines 45-60) mode (column 3, lines 56-67, column 4, lines 1-35) based on the comparison of the normalized field difference sequence with the at least one test vector (column 3, lines 56-67, column 4, lines 1-35).

As to claim 16 see the rejection of claim 7 above.

As to claim 20 see the rejection of claim 7 above.

As to claim 21 see the rejection of claim 7 above.

As to claim 8, De haan discloses the method of claim 7, wherein producing the normalized field difference sequence (column 1, lines 10- 63, column 3, lines 39- 67, column 4, lines 1- 35) includes:

segmenting a first field of digital video data into a first plurality of pixel groups (column 1, lines 10-63);

segmenting a second field of digital video data into a second plurality of pixel groups (column 2, lines 47- 57);

producing a plurality of pixel group scores based on differences between corresponding pixel groups in the first plurality of pixel groups and the second plurality

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of pixel groups (note, displacement is based on first and second field. Selecting the vector to be tested which yields the best match between the respective second block and the first block to obtain the local motion vector, column 1, lines 47- 57, 58- 64); and

determining a field difference metric between the first field of digital video data and the second field of digital video data based on the plurality of pixel group scores (column 1, lines 44- 63).

As to claim 9, De haan discloses the method of claim 8, wherein the first plurality of pixel groups include a first plurality of blocks, the second plurality of pixel groups include a second plurality of blocks, and the plurality of pixel group scores includes a plurality of block scores (column 1, lines 10-63, column 3, lines 56- 67, column 4, lines 1- 28);

As to claim 10, De haan discloses the method of claim 8, wherein the at least one test vector includes a plurality of film basis vectors and a plurality of video basis vectors (column 1, lines 47- 63, column 10, lines 15-29).

As to claim 12, De haan discloses the method of claim 8, wherein determining whether the received sequence of data fields is film or video further includes comparing the normalized field difference sequence to a plurality of film splice vectors.

As to claims 13 and 17, De haan discloses the method of claim 12, further comprising determining a phase index based on the comparison between the normalized field difference sequence and the plurality of film splice vectors (column 4, lines 9- 34, column 10, lines 15- 59).

As to claim 14, De haan discloses the method of claim 8, further comprising determining a phase index based on the comparison of the normalized field difference sequence with the at least one test vector (column 4, lines 9- 34, column 10, lines 15- 59).

Allowable Subject Matter

5. Claims 11,15 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other prior art cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reis et al., (US. 5,341,142) discloses target acquisition and tracking system.

Horiike et al., (US.5,844,618) discloses method and apparatus for telecine image conversion.

Westerman (US.6,297,848B1) discloses low-delay conversion of 3:2 pulldown videos to progressive format with field averaging.

Thomas et al., (US.6,005,639) discloses vector assignment for video image motion compensation.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Thursday 7.30 - 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheela Chawan
Patent Examiner
Group Art Unit 2624
Dec 21, 2006

Sheela Chawan
SHEELA CHAWAN
PRIMARY EXAMINER